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ABSTRACT

This study compares the effects of command, task, and individual program styles of teaching as they affect specific skills in alley soccer, a game knowledge test on alley soccer, and personal and social adjustment. A battery of skills tests, a game knowledge test on alley soccer, and the California Test of Personality were given to 221 fifth-graders. The pre- and post-battery of skills tests indicated that boys obtained better scores than the girls on the various soccer skills and that students who had more extensive exposure to the activity developed greater soccer skills. A significant difference was indicated between the task and in individual program styles of teaching on the pre- and post-game knowledge test. The significant sex difference occurred where the experimental groups met three times weekly, with the boys obtaining higher scores than the girls. The pre- and post-personal adjustment scores indicated very little sex difference, with girls attaining higher scores than the boys did. The pre- and post-social adjustment test scores indicated that the girls obtained better scores than the boys did. (A 9-item bibliography is included.) (Author)

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A COMPARISON OF THE EFFECTS OF COMMAND, TASK AND INDIVIDUAL PROGRAM STYLES OF TEACHING ON FOUR DEVELOPMENTAL CHANNELS

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INTRODUCTION

Literature dealing with methodology in teaching physical education is extensive. In a recent review, Locke (1) found that of the more than six hundred studies, approximately two hundred could be designated as methods research, in the traditional sense of the term "methods."

In theory, research finding on teaching is one source of information that can be utilized in designing favorable conditions for learning motor skills. In practice, however, teaching physical education has little to do with scientific knowledge drawn from research on teaching. Perhaps the instructional methods used in teaching physical education skills are based largely upon the experience of successful teachers or upon the empirical beliefs of outstanding performers. Hence, the charisma of famous athletes, expediency, personal needs, school conditions, traditional "method" textbooks, and the force of social expectation all act with power to shape the physical educator's repertoire of teaching behavior into a traditional method.

Mosston's spectrum of teaching styles (4), the most significant advance in theory of pedagogy on teaching physical education, is presently exerting some influence in the field of physical education. A style of teaching, as defined by Mosston, essentially involves a number of decisions made by

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the teacher and the students in connection with the process of instruction. The seven styles of teaching, from command to discovery (4), are presented along a continuum. The relative position of each style of the continuum is determined by the number and type of decisions that the student is permitted to make concerning pre-class decisions, execution, and evaluation of the lesson. Therefore, the shift from one style to the next higher style is characterized by the transfer of decision making from the teacher to the student.

Mosston contends that alternative teaching styles, from command to discovery, have a significant effect upon the basic development of the learner. In the context of physical education, the emotional development channel involves the physical self-concept of the child, his ability to accept himself in the pursuit of excellence and in facing deterring physical limitations. The teacher can aid the child's emotional development if he helps the child develop his own physical image. The intellectual development channel involves the ability to think; to assemble data; to weigh, judge, and organize information; to remember; to project; to draw conclusions; to imagine; to dream; and to invent. The teacher can design, stimulate, and liberate these capacities so that each child will be free to think of himself as a person. As the student moves along the channel of physical development, he seeks to explore and identify his physical capacities and limitations. He attempts movement preference in a variety of

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situations and searches for experiences which help him develop to higher levels of physical security, physical expression, and joy. He is freed from single standards pre-determined and constantly controlled by the teacher. The social interaction development channel conveys freedom of asscciation in and outside of school. This tendency involves a process of re-examining the interpersonal and intergroup practices in both the school and community (4).

While Mosston alleges, in a theoretical concept, that alternative styles have a definite effect on four developmental channels, it seems logical that the styles in the spectrum be put to experimental test. The purpose of this research, therefore, was to test the relative effects that three of Mosston's styles of teaching have on four developmental channels. Specifically, the questions to be answered were:

1. How does the use of deliberate styles of teaching affect the outcome of specific skills in alley soccer?

2. How does the use of deliberate styles of teaching affect the outcome of a game knowledge test on alley soccer?

3. How does the use of deliberate styles of teaching affect one's personal adjustment?

4. How does the use of deliberate styles of teaching affect one's social adjustment?

The command, task, and individual program styles of teaching were selected because:

1. The command style represents one extreme of the

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continuum in which all decisions are made by the teacher. In addition, it is noted for its long history and dominance in teaching physical education and, therefore, is useful as a methodological base.

2. The task style retains all the components in pre-preparation but shifts the component of doing, or performing the activity, to the student; once the task in physical performance is explained and demonstrated, the students are required to execute the tasks on their own.

3. The individual program style provides the learner with full opportunity for self-motivated learning, self-assessment, and decision making. Thus, two out of three variables in the teaching-learning process are being carried out independently by the student.

Alley soccer, a fall field sport, was selected because it is representative of a fast-moving, running and vigorous game. Elementary students are particularly intrigued with the fact that the ball must be handled with parts of the body other than the hands (8). In addition, alley soccer is a novelty game that maximizes participation of an entire class.

In addition to the main problem, this investigation compared the teaching styles as they affect specific skills in alley soccer, the outcome of a game knowledge test on alley soccer, one's personal adjustment, and one's social adjustment in relation to the number of physical education class meetings per week.

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Procedures

The sample used in this study consisted of 221 fifth grade students, ten and eleven years of age, enrolled in Lewis and Clark, Cold Springs, and Washington Elementary Schools, School District No. 1, Missoula, Montana.

One hundred students from Lewis and Clark, representing three separate classes, met five times weekly for a total of 125 minutes per week. Each class was assigned to a different style of teaching according to a table of random numbers (5). Ninety-five students from Cold Springs, representing three separate classes, met three times weekly for a total of 75 minutes per week. Each class was assigned to a different style of teaching according to a table of random numbers (5). Twenty-six students, fourteen boys and twelve girls, from Washington School, representing one fifth grade class, were given the pre- and post-tests to provide control data.

Although there were some differences in the occupations of the parents, many similarities did exist among the three schools regarding the students' test scores on the Iowa Tests of Basic Skills and grouping according to ability in reading. All students were assigned to their classes by the respective school administrators in accordance with normal School District No. 1 procedures.

Treatments were administered to all groups during their regular scheduled physical education class meetings. Each experimental class participated in twenty-five minutes of

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activity, three or five times weekly, for a period of eight consecutive weeks. The first and last week of the eight-week period was used to administer the various tests. The author administered the tests and taught the classes. The first five to eight minutes of each class period was devoted to warm-up activities. The remainder of the class period was utilized for skill drills (kicking, trapping, blocking, dribbling, passing, goal kicking, and punting the soccer ball) and skill games (circle soccer, mickey soccer, soccer kick back, and shuttle relay). As the students became more proficient in performing the various skills, more time was allotted to the game of alley soccer.

In the command style of teaching, all the variables of planning, execution, and evaluation of the unit on alley soccer, were rigidly controlled by the instructor. With the task style of teaching, the subjects were allowed to vary the execution phase of the program by selecting their own performance goal(s) from the listed goal(s) provided by the instructor. In the individual program style of teaching, the subjects were allowed all the freedom of the task style, but each subject set the goals of execution entirely on his own. The physical education classes in the control group were taught by the regular classroom teacher.

To insure that the styles of teaching for this research project were being taught consistently and correctly, Flanders Interaction Analysis Technique and a check list based

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on the three variables that Mosston (4) had for his teaching styles were used to verify the styles.

A five item skills test (dribbling, punt for distance, place kick for distance, kick for goal, and trapping) was administered to all subjects to assess physical development during the first and last week of the treatment period.

A written achievement test on alley soccer was administered to all subjects during the first and last week of the treatment period. The terminology and other questions found on this test were pre-tested to fit the vocabulary of fifth grade students. Additionally, the Kuder and Richardson formula was applied to determine reliability. From the coefficient of .87 which was obtained, the test was considered sufficiently reliable for the purposes of this study.

The first half of the California Test of Personality, 1953 Revision, was administered to determine personal development. Form BB was administered for the pre-test and Form AA was administered for the post-test. The components of the Personal Adjustment Test represent groupings of more or less specific tendencies to feel, think, or act (9).

To measure social development, the second half of the California Test of Personality, 1953 Revision, was administered to all subjects during the first and last week of the treatment period. The second half of Form BB was administered for the pre-test, and the second half of Form AA was administered for the post-test. The components of the Social

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Adjustment Test represent groupings of more or less specific tendencies to feel, think, or act (9).

A two way analysis of covariance with unequal replications per cell was used to determine significance of the levels of the factors for this study. Scheffe's multiple comparison technique (7), utilizing the control group as a base on which to make comparisons between styles, was used to determine significant differences between teaching styles. The program for the F-ratios, final values corrected for by the regression on the initial values, and the confidence interval was run on an IBM 1620 Computer using a Kingstran Version XV format.

Results and Discussion

A number of questions were posed for which the present investigation has sought answers. These basic questions are considered in light of the results of this study.

1. How does the use of deliberate styles of teaching affect the outcome of specific skills in alley soccer?

The experimental styles of teaching used in this study were not significantly different from one another in terms of overall improvement between the pre- and post-battery of skills tests. However, when the various styles of teaching were compared to the control group on the pre- and post-battery of skills, a number of significant differences were noted.

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The cumulative significant difference of progress by the various groups on the skills in alley soccer shows that the command group made more progress than either the individual program or task groups. The experimental group comparison results are contradictory to Mosston's theoretical prediction of the position of each style on the physical development channel (4). According to Mosston, the position of the command style, moving from minimum to maximum on the physical development channel, is further away from maximum progress than either the task or individual program styles of teaching (4). About the command style of teaching, Mosston states, "Whenever the command style of teaching is employed to its fullest, regardless of subject matter, it imposes limitations in all four developmental channels" (4:29). The task style, according to Mosston, "accommodates greater efficiency of participation, more learning..." (4:70), and the individual program style "has strikingly far-reaching implications... for the individual's progress along the four developmental channels..." (4-139).

When considering the extent of exposure to the activity, an interesting occurrence was noted. Where the experimental groups met five times weekly, the command group made greater soccer skill progress than the individual program and task groups. This again is contradictory to Mosston's theoretical prediction of the position of each style on the physical development channel, whereby the individual program and task styles

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should move the student further toward maximum development on the physical channel than the command style. However, where the experimental groups met three times weekly, the individual program group indicated greater soccer skill progress than either the command or task groups. In this instance, where the individual program group showed more developmental soccer skill progress, Mosston's theory that the individual program style moves the student closer to maximum development on the physical channel was supported. In addition, the students who had more extensive exposure to the activity developed greater soccer skills.

There is a general recognition whereby males tend to do better in athletic skills than females (6). Males in this study obtained better scores than females on the various soccer skills.

The interaction between teaching styles and sex, as indicated by the pre- and post-battery of skills tests, shows that the experimental styles had different effects on the various groups. The net effect of the results would support the opinion expressed by Torrance, whereby a way of teaching should include a wide repertoire of styles so that each child has a chance to learn and develop a wide range of his talents (3).

2. How does the use of deliberate styles of teaching affect the outcome of a game knowledge test on alley soccer?

The reason for the difference between the task and

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and individual program styles of teaching on the pre- and post-game knowledge test remains a mystery. A comparison of the raw scores and adjusted mean scores of the task and individual program groups shows that the individual program group attained higher scores than the task group. However, the mystery remains, as the individual program group was not significantly better than the command group and the command group was not significantly better than the task group. An interesting occurrence about the preceding difference between the individual program style and the task style of teaching on the game knowledge test was that it occurred where the experimental groups met three times weekly. The difference noted was great enough to cause a similar result when the total effects of the various groups were combined.

When the pre- and post-test results of the experimental groups were compared to the pre- and post-tests of the control group on the game knowledge test, all of the alternative styles were significantly different from the control group. These results would indicate that no one style, regardless of exposure, is better than another for teaching game knowledge achievement in alley soccer. The results of the pre- and post-game knowledge test on alley soccer achievement are in contrast to Mosston's theory whereby he says, "The command style in physical education inhibits and prevents growth of cognition" (4:29). Mosston further indicates that the task style "accommodates more learning" (4:70) and the individual

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program style should produce greater results than the command and task styles of teaching (4). The net effect of the findings leads one to conclude that no one style is better than another style for teaching game knowledge achievement in alley soccer.

The sex difference indicated by the pre- and post-game knowledge test occurred where the experimental groups met three times weekly. Based on personal observations, it is the belief of the author that the girls who had the least exposure to the activity also had less interest, resulting in the significant sex difference.

The interaction between teaching styles and sex indicates that the experimental styles had different effects on the various groups. The fact that interaction between teaching styles and sex occurred lends support to the opinion by Combs, who believes that the style must "be appropriate for the students with whom they are used" (2:266).

3. How does the use of deliberate styles of teaching affect one's personal adjustment?

The experimental styles of teaching used in this study were not significantly different from one another in terms of overall improvement between the pre- and post-personal adjustment test scores. Even when the various styles of teaching were compared to the control group on the pre- and post-test personal adjustment scores, no significant differences were shown between the experimental groups and the

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control group. Also, exposure to the activity did not significantly influence the results. These findings give further support to the opinions and theories that no one style of teaching is better than another and a melange of teaching styles should be used to meet the moment-to-moment classroom situations. The results from this study on the emotional development channel are contradictory to Mosston's placement of each style within the spectrum of styles, whereby the individual program style should move the student further toward maximum than the task and command styles and the task style further than the command style on the emotional development channel (4).

The sex differences indicated were very few from the results of the pre- and post-personal adjustment scores. I It is the opinion of the author that the physical education activity, alone, was not sufficient to be the causative factor for the differences obtained.

To determine accurately why interaction between teaching styles and sex occurred is impossible. The limited amount of exposure to the activity and the total school environment do not permit judgment other than to suggest that different styles of teaching may be needed to meet different situations in the daily tasks.

4. How does the use of deliberate styles of teaching affect one's social adjustment?

The experimental styles of teaching used in this study

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were not significantly different from one another, irrespective of exposure, in terms of overall improvement between the pre- and post-social adjustment test scores. Also, when the various styles of teaching were compared to the control group on the pre- and post-test social adjustment scores, no distinguishable differences were noted. The results revealed by the pre- and post-social adjustment tests scores indicate that various teaching procedures should be used to enhance growth on the social development channel. This again is in contrast to Mosston's placement of the experimental styles within the spectrum of styles, whereby the individual program style supposedly moves the student further toward maximum on the social development channel than the task and command styles and the task style moves the student further than the command style on the social channel (4). However, the utilization of various methods to meet moment-to-moment needs receives support.

The sex differences indicated by the pre- and post-social adjustment test scores may or may not be attributed to various factors within and outside of school.

The varied pattern of interaction among teaching styles and sex precludes any judgment on why interaction occurred. One can only speculate that different styles of teaching may be needed to meet certain situations and to permit enhancement of the social growth for different individuals.

In summation, it can be said that the choice of a teaching

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style among the experimental styles used in this research is that no one style was better than another in the development along the four developmental channels.

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